

CLAIMS

What is claimed is:

1. A fence system comprising:

5 a multi-position rail configured to be supported in a laterally extending, elevated orientation, said rail including supporting means for (i) supporting a first boundary-defining barrier means in vertical alignment with respect to said rail when said rail is disposed in a first orientation, and (ii) supporting a second boundary-defining barrier means in a lateral orientation with respect to said rail when said rail is disposed in a second orientation; and

10 a boundary-defining barrier means configured and arranged to be supported by the rail.

15 2. The fence system of claim 1, wherein the boundary-defining barrier means further comprises a plurality of fence planks.

20 3. The fence system of claim 1, wherein the boundary-defining barrier means further comprises a lattice member.

25 4. The fence system of claim 1, wherein the supporting means further comprises a first interior side wall and an opposing second interior sidewall defining an open channel therebetween and an elongate opening extending along at least

a majority length of the multi-position rail, and a first projection protruding outwardly from the first interior sidewall, and wherein the boundary-defining barrier means further comprises a plurality of fence planks each having a first end for inserting into the open channel of the supporting means, wherein at least some of said fence planks include a first protrusion projecting outwardly from the planks, said planks and protrusions being configured and dimensioned to enable the first protrusion to engage against the first projection of the supporting means such that said planks are supported in place by the multi-position rail.

5. The fence system of claim 4, wherein the supporting means further comprises a second projection protruding outwardly from the second interior sidewall, and wherein at least some of the planks include a second protrusion in addition to the first protrusion, said planks and protrusions being configured and dimensioned to enable the first and second protrusions to engage against the first and second projections for increased support of the planks by the multi-position rail.

6. The fence system of claim 1, wherein the multi-position rail comprises an upper rail, the fence system further comprising:

a lower, multi-position rail including supporting means for (i) supporting a lower section of the first boundary-defining barrier means in vertical alignment with respect to said lower, multi-position rail when said lower rail is
5 disposed in a first orientation, and (ii) supporting a lower section of the second boundary-defining means in a lateral orientation with respect to said lower, multi-position rail when said lower rail is disposed in a second orientation.

10 7. The fence system of claim 1, wherein the supporting means comprises:

a first interior side wall and an opposing second interior sidewall defining an open channel therebetween and an elongate opening extending along at least a majority length of
15 the multi-position rail; and

cap means for covering at least a portion of the open channel and intercoupling the rail and the boundary-defining barrier means such that said cap means resides between said rail and said barrier means.

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8. The fence system of claim 1, wherein the supporting means comprises:

a first interior sidewall and an opposing second interior sidewall defining an open channel therebetween and an elongate

opening extending along at least a majority length of the multi-position rail.

9. The fence system of claim 8, wherein the supporting
5 means further comprises a first projection protruding outwardly from the first interior sidewall.

10. The fence system of claim 1, wherein the multi-
position rail includes a cross section having a first, longer
10 dimension and a second, shorter dimension, and wherein the first, longer dimension extends in a substantial vertical direction when said rail is disposed in the first orientation.

11. The fence system of claim 10, wherein the second,
15 shorter dimension extends in a substantial vertical direction when said rail is disposed in the second orientation.

12. The fence system of claim 1, wherein the supporting
means comprises an elongate, open channel and wherein the
20 first barrier means extends into said elongate, open channel when the rail is disposed in the first orientation, and wherein the supporting means further comprises an elongate cap member configured and dimensioned to cover at least a portion of the open channel and wherein the second barrier means is
25 coupled to said cap member when the rail is disposed in the

second orientation such that said cap member resides between the rail and the second barrier means.

13. The fence system of claim 1, wherein the first
5 barrier means comprises a plurality of fence planks, the fence system further comprising:

spacing means for being inserted into the rail between at least some of the fence planks to thereby maintain a minimum spacing between said at least some of the fence planks.

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14. The fence system of claim 1, wherein the first barrier means comprises a plurality of fence planks configured and arranged to be supported by the multi-position rail, and wherein the fence system further comprises:

15 rail means for supporting a plurality of fence planks in a fixed position, said rail means comprising, in part, (i) the multi-position rail, said rail having an elongate channel formed therein, and further (ii) a sidewall covering the elongate channel, said sidewall having spaced-apart openings
20 formed therein for receiving the fence planks therethrough, respectively.

15. The fence system of claim 1, wherein the multi-position rail includes a hollow portion, and wherein the fence
25 system further comprises:

a reinforcement member disposed within the hollow portion of the rail.

16. The fence system of claim 15, wherein the
5 reinforcement member is tubular and has a cross sectional shape that is similar to a cross sectional shape of the hollow portion of the rail.

17. The fence system of claim 1, wherein the boundary-
10 defining barrier means further comprises a plurality of planks, each plank having a front wall, rear wall, and first and second endwalls, each endwall having a cavity formed therein defined by cavity-defining walls, the fence system further comprising:

15 joining means for engaging against cavity-defining walls within cavities of adjacent endwalls of two adjacent planks to thereby join said two adjacent planks.

18. The fence system of claim 17, wherein the cavities
20 in the endwalls each comprise an elongate, open channel having an elongate opening extending along a length of said open channel, said channel being defined by a bottom channel wall that is wider than the elongate opening.

19. The fence system of claim 18, wherein the joining means comprises an elongate strip including a cross section having a first wide end, an opposing second wide end, and an intermediate section that is narrower than the first wide end
5 and the second wide end.

20. The fence system of claim 19, wherein the elongate strip is configured and dimensioned to reside slidably disposed within first and second adjacent open channels of
10 first and second adjacent endwalls of first and second adjacent planks, wherein the first wide end resides within the first open channel and the second wide end resides within the second open channel, and wherein the first wide end is wider than the elongate opening of the first open channel and the
15 second wide end is wider than the elongate opening of the second open channel to prevent the wide ends of the elongate strip from moving through said elongate openings.

21. The fence system of claim 18, wherein the joining
20 means comprises expansion/contraction means for being inserted into an elongate open channel of an endwall of a plank and thereafter expanding into engagement with walls defining said elongate open channel.

22. The fence system of claim 21, wherein the expansion/contraction means comprises a resilient, V-shaped member having resiliency and elastic memory and further comprising a first arm and a second arm joined to said first arm, said first and second arms being moveable toward each other by operation of the resiliency when a compressive force is applied to said first and second arms, and wherein the elastic memory operates to force said first and second arms outwardly away from each other with said compressive force is released.

23. The fence system of claim 19, wherein the expansion/contraction means comprises an elongate V-strip having a V-shaped cross section.

24. The fence system of claim 20, wherein the elongate V-strip is coupled at a narrow edge thereof to a wall defining an open channel of an endwall of a first plank, and wherein a wide portion of the V-strip is configured and dimensioned to reside slidably disposed within an open channel of a second plank positioned adjacent said first plank.

25. A fence system comprising:

a rail configured to be supported in a laterally extending orientation for supporting a plurality of fence planks in a fixed position;

5 a plurality of fence planks configured and arranged to be supported by the rail; and

spacing means for being inserted into the rail between at least some of the fence planks to thereby maintain a minimum spacing between said at least some of the fence planks.

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26. The fence system of claim 25, wherein the spacing means further comprises a plurality spacers, each spacer comprising a plurality of ribs formed thereon.

15 27. The fence system of claim 25, wherein the spacing means further comprises a plurality of spacers, each spacer comprising:

an upper wall;

20 a first sidewall and an opposing second sidewall, said first and second sidewalls extending from the upper wall in a substantial parallel orientation to form a channel therebetween.

28. The fence system of claim 27, wherein each spacer is
25 made of a resilient material having elastic memory to thereby

enable the first and second sidewalls to flex inwardly toward each other when subjected to a compressive force.

29. The fence system of claim 27, wherein each spacer
5 further comprises a rib disposed on an outer surface of the first sidewall, and another rib disposed on an outer surface of the second sidewall.

30. The fence system of claim 27, wherein each spacer
10 further comprises a first plurality of elongate ribs disposed on an outer surface of the first sidewall, and a second plurality of ribs disposed on an outer surface of the second sidewall.

31. The fence system of claim 25, wherein the spacing
15 means is made of a resilient material having elastic memory.

32. The fence system of claim 25, wherein the spacing
means further comprises a plurality of spacers, each spacer
20 comprising:

an upper wall;

a first sidewall having an upper section and a lower
section that cooperatively form a non-straight angle
therebetween, and an opposing second sidewall having an upper
25 section and a lower section that cooperatively form a non-

straight angle therebetween, such that the first and second sidewalls each have a concave surface and wherein the concave surfaces are facing each other.

5 33. The fence system of claim 32, wherein the first and second sidewalls each have a convex surface and wherein each spacer further comprises a first elongate rib disposed on the convex surface of the first sidewall and a second elongate rib disposed on the convex surface of the second sidewall.

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34. The fence system of claim 25, wherein the fence planks comprise a substantially rectangular cross section having four sides, each side being characterized by an absence of bumps or grooves.

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35. The fence system of claim 27, wherein each spacer further comprises a bottom wall disposed between the first and second sidewalls such that the upper wall, bottom wall, first sidewall and second sidewall collectively form a channel that
20 is closed along its length.

36. The fence system of claim 35, wherein the rail includes an open channel formed therein and an elongate opening extending along at least a majority length of the rail
25 means, said open channel having a depth,

37. The fence system of claim 36, wherein the spacer has a height that is not larger than the depth of the open channel of the rail to thereby enable said spacer to be placed completely into said open channel such that every portion of
5 said spacer resides within said open channel.

38. A fence system comprising:

rail means configured to be supported in a laterally extending orientation for supporting a plurality of fence
10 planks in a fixed position;

a plurality of fence planks configured and arranged to be supported by the rail; and

cap means for covering a portion of the rail and intercoupling the rail and the fence planks such that said cap
15 means resides between said rail and said fence planks.

39. The fence system of claim 38, wherein the rail means includes an open channel formed therein and an elongate opening extending along at least a majority length of the rail
20 means, and wherein the cap means includes an elongate cap member configured and dimensioned to clamp onto the rail means.

40. The fence system of claim 39, wherein the rail means
25 includes a first elongate groove formed along a first side

thereof, and wherein the cap means includes locking means for engaging against the rail means within the first elongate groove to thereby lock the cap means in place onto the rail means.

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41. The fence system of claim 40, wherein the rail means further comprises a second elongate groove formed along a second side thereof, and wherein the locking means further comprises means for engaging against the rail means within the
10 second elongate groove.

42. The fence system of claim 40, wherein the rail means further comprises a first elongate lip that defines a portion of the first elongate groove, and wherein the locking means
15 comprises a first elongate spline configured and dimensioned to engage against the first elongate lip when the cap means is locked into place onto the rail means.

43. The fence system of claim 42, wherein the rail means
20 further comprises a second elongate lip that defines a portion of the second elongate groove, and wherein the locking means comprises a second elongate spline configured and dimensioned to engage against the second elongate lip when the cap means is locked into place onto the rail means.

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44. The fence system of claim 38, wherein the cap means includes spaced-apart openings formed therein for receiving the fence planks therethrough, respectively.

5 45. The fence system of claim 38, wherein the cap means extends along the rail means in a parallel orientation with respect to said rail means, and wherein the planks are disposed in a substantial orthogonal orientation with respect to the rail means and the cap means.

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 46. The fence system of claim 38, wherein the rail means comprises an elongate, open channel and wherein the cap means is configured and dimensioned to cover at least a portion of the open channel and wherein the planks are coupled to said cap means such that said cap means resides between the rail and the planks.

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 47. The fence system of claim 38, wherein the rail means comprises a rounded, convex exterior surface, and wherein the cap means comprises a rounded, concave interior surface having a similar degree of curvature as the rounded, exterior surface of the rail means such that the cap means is disposed in a contiguous grip upon the rail means with the rounded, concave interior surface of the cap means disposed in contact with the rounded, convex exterior surface of the rail means.

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48. A fence system comprising:

rail means configured to be supported in a laterally extending orientation for supporting a plurality of fence planks in a fixed position; and

5 a plurality of fence planks configured and arranged to be supported by the rail means;

wherein the rail means is hollow and includes a sidewall having spaced-apart openings formed therein for receiving the fence planks therethrough, respectively.

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49. The fence system of claim 48, wherein the rail means comprises an elongate rail member and wherein the sidewall of the rail means comprises a separate, elongate member disposed in a grip upon the elongate rail member.

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50. The fence system of claim 48, a first interior side wall and an opposing second interior sidewall defining an open channel therebetween and an elongate opening extending along at least a majority length of the multi-position rail, and a
20 first projection protruding outwardly from the first interior sidewall.

51. The fence system of claim 48, wherein the sidewall is perforated and the spaced-apart openings thereby constitute
25 perforations.

52. The fence system of claim 48, wherein the spaced-apart openings are evenly spaced.

53. A fence system comprising:

5 rail means configured to be supported in a laterally extending orientation for supporting a plurality of fence planks in a fixed position, wherein the rail means further comprises (i) an open upper channel defining an elongate upper opening extending along at least a majority length of the rail
10 means, and (ii) an open lower channel defining an elongate lower opening extending along at least a majority length of the rail means, such that said rail means has a generally H-shaped cross section;

first barrier means for inserting into the open upper
15 channel of the rail means and for defining an upper boundary extending along at least a portion of the rail means;

second barrier means for inserting into the open lower channel of the rail means and for defining a lower boundary extending along at least a portion of the rail means;

20 wherein at least one of the channels is defined by a first sidewall and an opposing second sidewall and wherein at least one ledge protrudes from one of said sidewalls into said at least one of the channels;

wherein at least one of the barrier means includes at
25 least one protrusion extending outwardly from said barrier

means, said protrusion being configured for protruding into engagement with the at least one ledge when said at least one of the barrier means is inserted into the at least one of the channels to thereby inhibit removal of said barrier means from
5 the rail means.

54. The fence system of claim 53, wherein one of the barrier means comprises a plurality of fence planks.

10 55. The fence system of claim 54, further comprising:
spacing means for being inserted into the rail means between at least some of the fence planks to thereby maintain a minimum spacing between said at least some of the fence planks.

15 56. The fence system of claim 53, wherein one of the barrier means comprises a plurality of fence planks, and wherein the fence system further comprises:

20 cap means for covering at least one of the channels, said cap means including spaced-apart openings formed therein for receiving the fence planks therethrough, respectively.

57. A fence system comprising:
a multi-position rail configured to be supported in a
25 laterally extending, elevated orientation, said rail including

supporting means for (i) supporting a first boundary-defining barrier means in vertical alignment with respect to said rail when said rail is disposed in a first orientation, and (ii) supporting a second boundary-defining barrier means in a lateral orientation with respect to said rail when said rail is disposed in a second orientation;

a boundary-defining barrier means configured and arranged to be supported by the rail, wherein the boundary-defining barrier means further comprises a plurality of fence planks;

10 wherein the supporting means further comprises a first interior side wall and an opposing second interior sidewall defining an open channel therebetween and an elongate opening extending along at least a majority length of the multi-position rail, and a first projection protruding outwardly from the first interior sidewall, and wherein the boundary-defining barrier means further comprises a plurality of fence planks each having a first end for inserting into the open channel of the supporting means, wherein at least some of said fence planks include a first protrusion projecting outwardly

15 from the planks, said planks and protrusions being configured and dimensioned to enable the first protrusion to engage against the first projection of the supporting means such that said planks are supported in place by the multi-position rail;

20 wherein the supporting means further comprises a second projection protruding outwardly from the second interior

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sidewall, and wherein at least some of the planks include a second protrusion in addition to the first protrusion, said planks and protrusions being configured and dimensioned to enable the first and second protrusions to engage against the first and second projections for increased support of the
5 planks by the multi-position rail;

wherein the multi-position rail comprises an upper rail, the fence system further comprising:

a lower, multi-position rail including supporting
10 means for (i) supporting a lower section of the first boundary-defining barrier means in vertical alignment with respect to said lower, multi-position rail when said lower rail is disposed in a first orientation, and (ii) supporting a lower section of the second boundary-
15 defining means in a lateral orientation with respect to said lower, multi-position rail when said lower rail is disposed in a second orientation;

cap means for covering at least a portion of the open channel and intercoupling the rail and the boundary-defining
20 barrier means such that said cap means resides between said rail and said barrier means;

wherein the supporting means further comprises a first projection protruding outwardly from the first interior sidewall;

wherein the multi-position rail includes a cross section having a first, longer dimension and a second, shorter dimension, and wherein the first, longer dimension extends in a substantial vertical direction when said rail is disposed in the first orientation;

wherein the second, shorter dimension extends in a substantial vertical direction when said rail is disposed in the second orientation; and

spacing means for being inserted into the rail between at least some of the fence planks to thereby maintain a minimum spacing between said at least some of the fence planks.

58. A method of assembling a plurality of fences, said method comprising the steps of:

(a) selecting a first multi-position rail;

(b) supporting the first multi-position rail in a laterally extending, elevated orientation such that said first multi-position rail is disposed in a first cross-sectional orientation, and coupling a first barrier means to said rail such that the first barrier means and the rail are disposed in vertical alignment to thereby form a first fence;

(c) selecting a second multi-position rail having substantially the same cross-sectional dimensions as the first multi-position rail; and

(d) supporting the second multi-position rail in a laterally extending, elevated orientation such that said second multi-position rail is disposed in a second cross-sectional orientation that is rotationally displaced in comparison to the first cross-sectional orientation, and coupling a second barrier means to said second multi-position rail such that the second barrier means and the second rail are disposed in a lateral orientation with respect to each other to thereby form a second fence.

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59. A method of assembling a fence, said method comprising the steps of:

(a) selecting an elongate rail having an open channel formed as a portion of the rail, said open channel defining an elongate opening extending along at least a majority length of the rail;

(b) coupling an elongate cap member to the rail such that said cap member covers at least a portion of the open channel of the rail;

(c) coupling a barrier means to the cap member such that said barrier means extends from said cap member to form a fence.

60. A method of assembling a fence, said method comprising the steps of:

(a) selecting an elongate rail having an open channel formed as a portion of the rail, said open channel defining an elongate opening extending along at least a majority length of the rail;

5 (b) coupling an elongate cap member to the rail such that said cap member covers at least a portion of the open channel of the rail, said cap member having spaced-apart openings formed therein;

(c) placing a plurality of fence planks through the
10 openings of the cap member, respectively, such that said fence planks extend sequentially from the open channel of the rail through the openings of the cap member and away from the rail and cap member to thereby form a fence.

15 61. A method of assembling a fence, said method comprising the steps of:

(a) selecting an elongate rail having an open channel formed as a portion of the rail, said open channel defining an elongate opening extending along at least a majority length of
20 the rail; and

(b) inserting a plurality of ends of fence planks into the open channel such that said fence planks extend outwardly from said channel and inserting a plurality of spacers into the open channel and between the planks, respectively, to
25 thereby maintain a minimum spacing between said planks.